(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number
WO 2005/088466 A1

(51) International Patent Classification[7]: G06F 13/00, 15/16

(21) International Application Number: PCT/US2005/007655

(22) International Filing Date: 9 March 2005 (09.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/551,610 9 March 2004 (09.03.2004) US

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

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(54) Title: SYSTEM AND METHOD FOR PEER-TO-PEER CONNECTION OF CLIENTS BEHIND SYMMETRIC FIREWALLS

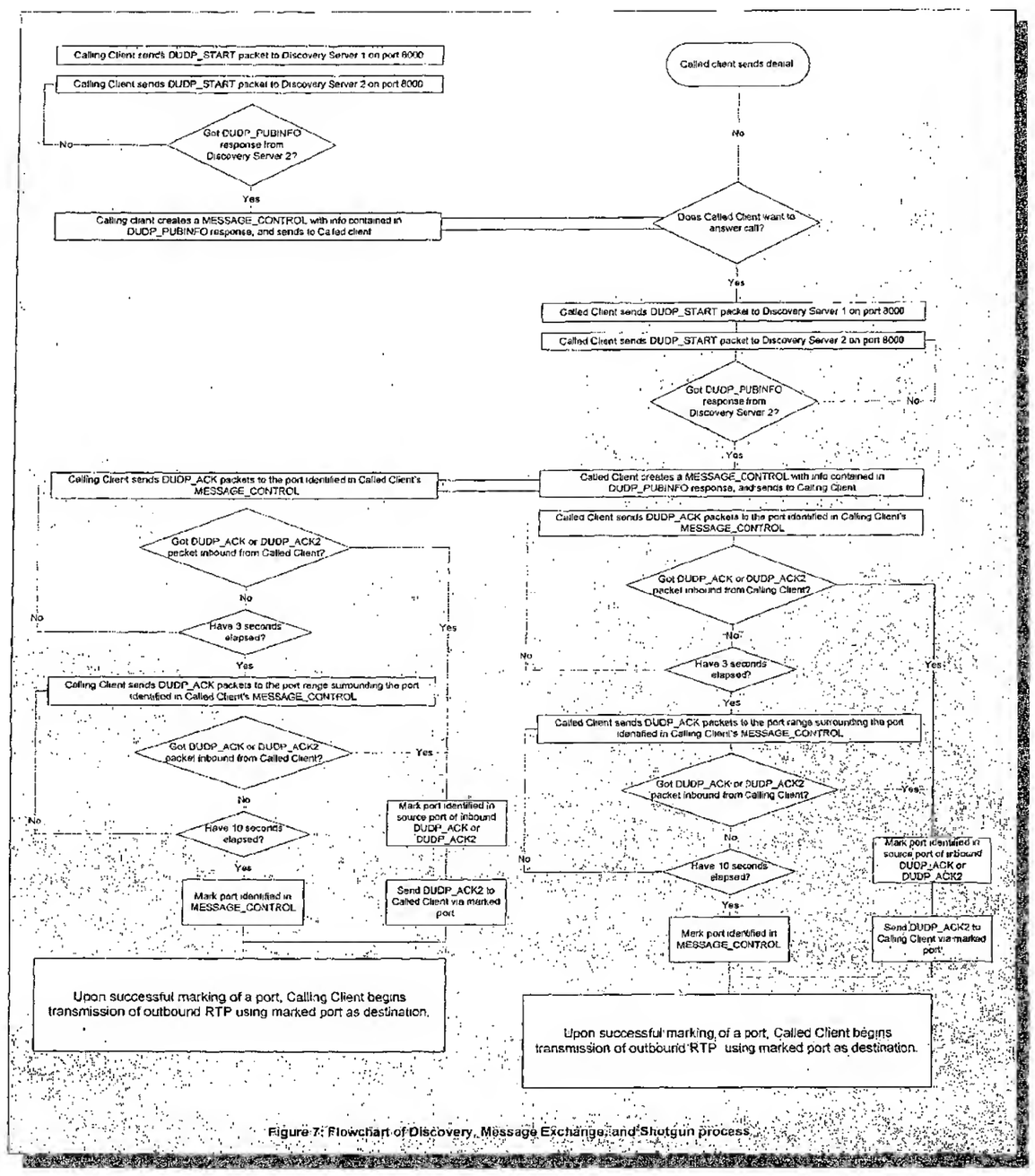

Figure 7: Flowchart of Discovery, Message Exchange, and Shotgun process

(57) Abstract: A system and method for establishing and maintaining two-way peer-to-peer network communication between clients who are behind symmetric firewalls/NATs is presented (fig 7). In one exemplary embodiment, the inventive system and method uses third party address-and-port discovery servers to ascertain the nature and port-mapping metrics of a given client's firewall/NAT. A systematic, multiple UDP Hole Punch method is employed for ports within a predicted range, and the source port of the first successful forwarding of an inbound packet is used by the client for subsequent outgoing traffic. Preferably, the method occurs symmetrically, thus ensuring that both clients' firewalls receive packets for which the source/destination ports and source/destination addresses fully-tuple-match with a previous client request originating from within the protected network, and therefore forwards packets to the respective clients successfully (peer-to-peer). In additional, the system and method allows monitoring, management, and prevention of connections by firewall/NAT administrators.

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SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

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